

LISTING OF CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) An information processing apparatus comprising:
a detector that detects a recording medium to be positioned to be set in an accessible state;
a recording-medium starting section that activates the recording medium detected by said detector to activate the accessible state; and
a computer software program starting section that performs an authentication check on said recording medium activated by the recording-medium starting section, reads a computer software program from said recording medium only when a result of the authentication check is normal, and starts an execution of said computer software program.
2. (Currently Amended) The information processing apparatus as claimed in claim 1, wherein said computer software program starting section reads a file used for the authentication check from said recording medium set in the accessible state by said recording-medium starting section so as to perform the authentication check by using said file.
3. (Currently Amended) The information processing apparatus as claimed in claim 1, wherein said program starting section performs the authentication check on both a setting file recorded on said recording medium and on the computer software program to be read.

4. (Original) The information processing apparatus as claimed in claim 3, wherein the authentication check on said setting file is performed using an electronic signature produced from the setting file and identification information of said recording medium.

5. (Original) The information processing apparatus as claimed in claim 4, wherein the authentication check on said setting file is performed based on a comparison between a first message and a second message, the first message being based on the setting file and the identification information of said recording medium, the second message being a decrypted electronic signature produced from the setting file and the identification information of said recording medium.

6. (Currently Amended) The information processing apparatus as claimed in claim 3, wherein the authentication check on said computer software program to be read is performed using identification information of said information processing apparatus and an electronic signature produced from the computer software program to be read.

7. (Currently Amended) The information processing apparatus as claimed in claim 6, wherein the authentication check on said setting file is performed based on a comparison between a first message and a second message, the first message being based on the computer software program to be read and the identification information of said information processing apparatus, the second message being a decrypted electronic signature produced from the computer software program to be read and the identification information of said information processing apparatus.

8. (Currently Amended) The information processing apparatus as claimed in claim 3, wherein functions of the computer software program started in accordance with a result of the authentication check on the computer software program to be read are notified to an operator as available functions.

9. (Previously Presented) The information processing apparatus as claimed in claim 1, wherein said detector includes a slot into which the recording medium is insertable, and further comprises a status monitoring section that monitors a plug and play of said recording medium with respect to said slot.

10. (Currently Amended) An information processing apparatus comprising:
detection means for detecting a recording medium being positioned to be set in an accessible state;
recording-medium starting means for activating the recording medium detected by said detection means to activate the accessible state; and
computer software program starting means for performing an authentication check on said recording medium activated by the recording-medium starting means, reading a computer software program from said recording medium only when a result of the authentication check is normal, and starting an execution of said computer software program.

11. (Currently Amended) The information processing apparatus as claimed in claim 1, wherein said computer software program starting means reads a file used for the authentication check from said recording medium set in the accessible state by said recording-medium starting means so as to perform the authentication check by using said file.

12. (Currently Amended) The information processing apparatus as claimed in claim 10, wherein said computer software program starting means performs the authentication check on both a setting file recorded on said recording medium and on the computer software program to be read.

13. (Original) The information processing apparatus as claimed in claim 12, wherein the authentication check on said setting file is performed using an electronic signature produced from a setting file and identification information of said recording medium.

14. (Original) The information processing apparatus as claimed in claim 13, wherein the authentication check on said setting file is performed based on a comparison between a first message and a second message, the first message being based on the setting file and the identification information of said recording medium, the second message being a decrypted electronic signature produced from the setting file and the identification information of said recording medium.

15. (Currently Amended) The information processing apparatus as claimed in claim 14, wherein the authentication check on said computer software program to be read is performed using identification information of said information processing apparatus and an electronic signature produced from the computer software program to be read.

16. (Currently Amended) The information processing apparatus as claimed in claim 15, wherein the authentication check on said setting file is performed based on a comparison between a first message and a second message, the first message being based on the computer software program to be read and the identification information of said information processing

apparatus, the second message being a decrypted electronic signature produced from the computer software program to be read and the identification information of said information processing apparatus.

17. (Currently Amended) The information processing apparatus as claimed in claim 12, wherein functions of the computer software program started in accordance with a result of the authentication check on the computer software program to be read are notified to an operator as available functions.

18. (Original) The information processing apparatus as claimed in claim 10, wherein said detection means includes a slot into which the recording medium is insertable, and further comprises status monitoring means for monitoring a plug and play of said recording medium with respect to said slot

19. (Currently Amended) An image forming apparatus comprising:
a detector that detects a recording medium to be positioned to be set in an accessible state;
a recording-medium starting section that activates the recording medium detected by said detector to activate the accessible state; and
a computer software program starting section that performs an authentication check on said recording medium activated by the recording-medium starting section, reads a computer software program relating to an image formation operation from said recording medium only when a result of the authentication check is normal, and starts an execution of said computer software program.

20. (Currently Amended) The image forming apparatus as claimed in claim 19, wherein said computer software program starting section reads a file used for the authentication check from said recording medium set in the accessible state by said recording-medium starting section so as to perform the authentication check by using said file.

21. (Currently Amended) The image forming apparatus as claimed in claim 19, wherein said computer software program starting section performs the authentication check on both a setting file recorded on said recording medium and on the computer software program to be read.

22. (Original) The image forming apparatus as claimed in claim 21, wherein the authentication check on said setting file is performed using an electronic signature produced from the setting file and identification information of said recording medium.

23. (Original) The image forming apparatus as claimed in claim 22, wherein the authentication check on said setting file is performed based on a comparison between a first message and a second message, the first message being based on the setting file and the identification information of said recording medium, the second message being a decrypted electronic signature produced from the setting file and the identification information of said recording medium.

24. (Currently Amended) The information processing apparatus as claimed in claim 21, wherein the authentication check on said computer software program to be read is

performed using identification information of said image forming apparatus and an electronic signature produced from the computer software program to be read.

25. (Currently Amended) The information processing apparatus as claimed in claim 24, wherein the authentication check on said setting file is performed based on a comparison between a first message and a second message, the first message being based on the computer software program to be read and the identification information of said image forming apparatus, the second message being a decrypted electronic signature produced from the computer software program to be read and the identification information of said image forming apparatus.

26. (Currently Amended) The image forming apparatus as claimed in claim 21, wherein functions of the computer software program started in accordance with a result of the authentication check on the computer software program to be read are notified to an operator as available functions.

27. (Previously Presented) The information processing apparatus as claimed in claim 19, wherein said detector includes a slot into which the recording medium is insertable, and further comprises a status monitoring section that monitors a plug and play of said recording medium with respect to said slot.

28. (Currently Amended) The image forming apparatus as claimed in claim 19, further comprising:

hardware resources used in an image forming process;

computer software application programs configured to each perform a different process relating to the image formation operation; and

a platform provided between said hardware resources and said computer software application programs so as to manage the hardware resources that are commonly used by at least two of said computer software applications application programs.

29. (Currently Amended) An image forming apparatus comprising:

detection means for detecting a recording medium being positioned to be set in an accessible state;

recording-medium starting means for activating the recording medium detected by said detection means to activate the accessible state; and

computer software program starting means for performing an authentication check on said recording medium activated by the recording-medium starting means, reading a computer software program relating to an image formation operation from said recording medium only when a result of the authentication check is normal, and starting an execution of said computer software program.

30. (Currently Amended) The image forming apparatus as claimed in claim 29, wherein said computer software program starting means reads a file used for the authentication check from said recording medium set in the accessible state by said recording-medium starting means so as to perform the authentication check by using said file.

31. (Currently Amended) The image forming apparatus as claimed in claim 30, wherein said computer software program starting means performs the authentication check on

both a setting file recorded on said recording medium and on the computer software program to be read.

32. (Original) The image forming apparatus as claimed in claim 31, wherein the authentication check on said setting file is performed using an electronic signature produced from a setting file and identification information of said recording medium.

33. (Original) The image forming apparatus as claimed in claim 32, wherein the authentication check on said setting file is performed based on a comparison between a first message and a second message, the first message being based on the setting file and the identification information of said recording medium, the second message being a decrypted electronic signature produced from the setting file and the identification information of said recording medium.

34. (Currently Amended) The image forming apparatus as claimed in claim 33, wherein the authentication check on said computer software program to be read is performed using identification information of said information processing apparatus and an electronic signature produced from the computer software program to be read.

35. (Currently Amended) The image forming apparatus as claimed in claim 34, wherein the authentication check on said setting file is performed based on a comparison between a first message and a second message, the first message being based on the computer software program to be read and the identification information of said image forming apparatus, the second message being a decrypted electronic signature produced from the

computer software program to be read and the identification information of said image forming apparatus.

36. (Currently Amended) The image forming apparatus as claimed in claim 31, wherein functions of the computer software program started in accordance with a result of the authentication check on the computer software program to be read are notified to an operator as available functions.

37. (Original) The image forming apparatus as claimed in claim 29, wherein said detection means includes a slot into which the recording medium is insertable, and further comprises status monitoring means for monitoring a plug and play of said recording medium with respect to said slot.

38. (Currently Amended) The image forming apparatus as claimed in claim 29, further comprising:

hardware resources used in an image forming process;

computer software application programs configured to each perform a process relating to the image formation operation; and

a platform provided between said hardware resources and said computer software application programs so as to manage the hardware resources that are commonly used by at least two of said computer software application programs.

39. (Currently Amended) A computer software program starting method comprising:
detecting a recording medium being positioned to be set in an accessible state;
activating the detected recording medium to activate the accessible state;

performing an authentication check on said activated recording medium;
reading a computer software program from said recording medium only when a result of the authentication check is normal; and
starting an execution of said computer software program.

40. (Currently Amended) A recording medium used with an information processing apparatus configured to detect the recording medium when correctly loaded thereto, the recording medium storing at least one computer software program that is to be read by said information processing apparatus and starting the computer software program that is to be read only when a result of an authentication check on the computer software program that is to be read is normal after said recording medium is detected and activated to be in an accessible state and the authentication check is performed successfully.

41. (Original) The recording medium as claimed in claim 40, wherein said information processing apparatus has a slot into which the recording medium is insertable, and the recording medium is arranged to be loaded to said information processing apparatus in a plug and play manner.

42. (Currently Amended) A recording-medium producing method of producing a recording medium that stores a computer software starting program which causes an information processing apparatus to start, the recording-medium producing method comprising:

producing license information using at least identification information of said recording medium; and

recording the license information produced by the producing step and the computer software starting program on said recording medium.

43. (Currently Amended) The recording-medium producing method as claimed in claim 42, wherein said step of producing also produces the computer software starting program using the identification information of said information processing apparatus.

44. (Currently Amended) The recording-medium producing method as claimed in claim 42, wherein said step of producing produces the license information further using identification information of said recording medium and effective computer software program information as to computer software programs usable by said information processing apparatus.

45. (Currently Amended) The recording-medium producing method as claimed in claim 43, wherein said step of producing that also produces the computer software starting program using the identification information of said information processing apparatus ~~and~~ includes identification information of the computer software starting program which said information processing apparatus is caused to start.

46. (Currently Amended) The recording-medium producing method as claimed in claim 44, wherein said step of producing also produces a first electronic signature from the identification information of said recording medium and the effective computer software program information, and, then, produces the license information based on the effective computer software program information and the first electronic signature.

47. (Currently Amended) The recording-medium producing method as claimed in claim 45, wherein said step of producing also produces a second electronic signature from the identification information of said information processing apparatus and the computer software program, and, then, produces the computer software starting program based on the identification information of said information processing apparatus, the computer software program and the second electronic signature.

48. (Currently Amended) The recording-medium producing method as claimed in claim 46, wherein the first electronic signature is used for an authentication check on the effective computer software program information.

49. (Currently Amended) The recording-medium producing method as claimed in claim 47, wherein the second electronic signature is used for an authentication check on the computer software program.

50. (Currently Amended) The recording-medium producing method as claimed in claim 42, wherein said step of recording records on the recording medium at least one computer software starting program and at least one piece of license information corresponding to the computer software starting program on a one-to-one basis.

51. (Currently Amended) The recording-medium producing method as claimed in claim 42, wherein said step of recording records on the recording medium a plurality of computer software starting programs and one piece of license information corresponding to each of the computer software starting programs on a one-to-one basis.

52. (Previously Presented) The recording-medium producing method as claimed in claim 42, wherein said recording medium conforms to a plug and play standard.

53. (Original) The recording-medium producing method as claimed in claim 42, wherein said information processing apparatus is an image forming apparatus.

54. (Currently Amended) A recording-medium producing method of producing an updating recording medium for updating a starting recording medium that stores a computer software starting program to start an information processing apparatus, the recording-medium producing method comprising:

producing an updating computer software program for updating the computer software starting program which causes said information processing apparatus to start; and
recording the updating computer software program produced by the producing step on said updating recording-medium.

55. (Currently Amended) The recording-medium producing method as claimed in claim 54, wherein the step of producing produces the updating computer software program using identification information of said information processing apparatus and a second computer software program which updates the computer software starting program which causes said information processing apparatus to start.

56. (Currently Amended) The recording-medium producing method as claimed in claim 55, wherein the step of producing also produces an electronic signature from the identification information of said information processing apparatus and said second computer software program, and, then, produces the updating computer software program based on the

identification information of said information processing apparatus, the second computer software program and the electronic signature.

57. (Currently Amended) The recording-medium producing method as claimed in claim 56, wherein the electronic signature is used for an authentication check on the second computer software program.

58. (Previously Presented) The recording-medium producing method as claimed in claim 54, wherein the recording medium conforms to a plug and play standard.

59. (Original) The recording-medium producing method as claimed in claim 54, wherein said information processing apparatus is an image forming apparatus.

60. (Currently Amended) A recording-medium producing apparatus of producing a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

a license information creation section that produces license information using at least identification information of said recording medium; and

a recording section that records the license information produced by the producing step and the computer software program for starting the information apparatus on the starting recording medium.

61. (Currently Amended) A recording-medium producing apparatus for producing a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

producing means for producing license information using at least identification information of said recording medium; and

recording means for recording the license information produced by the producing means and the computer software program for starting the information processing apparatus on the starting recording medium.

62. (Currently Amended) A recording-medium producing apparatus of producing a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

a license information creation section that produces license information using at least identification information of said recording medium; and

a sending section that sends the license information produced by the license information creation section and the computer software program for starting the information processing apparatus to a recording section that records the license information produced by the license information creation section and the computer software program for starting the information processing apparatus on the starting recording medium.

63. (Currently Amended) A recording-medium producing apparatus for producing a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

producing means for producing license information using at least identification information of said recording medium; and

sending means for sending the license information and the computer software program for starting the information processing apparatus to recording means for recording

the license information produced by the producing means and the computer software program for starting the information processing apparatus on the starting recording medium.

64. (Currently Amended) A recording-medium producing apparatus of producing an updating recording medium for updating a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

an updating program creation section that produces an updating computer software program that updates the computer software program which causes said information processing apparatus to start using at least identification information of said information processing apparatus; and

a recording section that records the updating computer software program produced by the updating computer software program creation section on the updating recording medium.

65. (Currently Amended) A recording-medium producing apparatus for producing an updating recording medium for updating a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

producing means for producing an updating computer software program that updates the computer software program which causes said information processing apparatus to start using at least identification information of said information processing apparatus; and

recording means for recording the updating computer software program produced by the producing means on the updating recording medium.

66. (Currently Amended) A recording-medium producing apparatus of producing an updating recording medium for updating a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

an updating computer software program creation section that produces an updating computer software program that updates the computer software program which causes said information processing apparatus to start using at least identification information of said information processing apparatus; and

a sending section that sends the updating computer software program to a recording section that records the updating computer software program produced by the updating computer software program creation section on the updating recording medium.

67. (Currently Amended) A recording-medium producing apparatus for producing an updating recording medium for updating a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

the computer software program which causes said information processing apparatus to start using at least identification information of said information processing apparatus; and

sending means for sending the updating computer software program to recording means for recording the updating computer software program produced by the producing means on the updating recording medium.

68. (Currently Amended) A recording-medium producing system of producing a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

a license information creation section that produces license information of said starting recording medium using at least identification information of said starting recording medium; and

a recording section that records the license information produced by the license information creation section and the computer software program for starting the information processing apparatus on said starting recording medium,

wherein said license information creation section and said recording section are connected to each other via a predetermined network.

69. (Currently Amended) A recording-medium producing system for producing a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

producing means for producing license information of said starting recording medium using at least identification information of said starting recording medium; and

recording means for recording the license information ~~license information~~ produced by the producing means and the computer software program for starting the information processing apparatus on said starting recording medium,

wherein said producing means and said recording means are connected to each other via a predetermined network.

70. (Currently Amended) A recording-medium producing system of producing an updating recording medium for updating a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

an updating computer software program creation section that produces an updating computer software program which causes the information processing apparatus to start using at least identification information of said information processing apparatus; and

a recording section that records the updating computer software program produced by the updating computer software program creation section on said updating recording medium,

wherein said updating computer software program creation section and said recording section are connected to each other via a predetermined network.

71. (Currently Amended) A recording-medium producing system for producing an updating recording medium for updating a starting recording medium that stores a computer software program which causes an information processing apparatus to start, comprising:

producing means for producing an updating computer software program which causes the information processing apparatus to start using at least identification information of said information processing apparatus; and

recording means for recording the updating computer software program produced by the producing means on said updating recording medium,

wherein said producing means and said recording means are connected to each other via a predetermined network.

72. (Currently Amended) A recording medium for storing at least one computer software program which causes an information processing apparatus to start, wherein the recording medium stores license information produced using at least identification information of said recording medium and a starting computer software program produced based on the identification information of said information processing apparatus and the computer software program which causes said information processing apparatus to start.

73. (Currently Amended) The recording medium as claimed in claim 72, wherein the license information is produced based on a first electronic signature and effective computer software program list that indicates computer software programs usable by said information

processing apparatus, the first signature being produced from the identification information of said recording medium and the effective computer software program list.

74. (Currently Amended) The recording medium as claimed in claim 72, wherein the starting computer software program is produced based on a second electronic signature, the identification information of said information processing apparatus and the computer software program which said information processing apparatus is to start, said second electronic signature being produced from the identification information of said information processing apparatus and the computer software program which causes said information processing apparatus to start.

75. (Previously Presented) The recording medium as claimed in claim 72, wherein said recording medium conforms to a plug and play standard.

76. (Currently Amended) An updating recording medium for updating a starting recording medium that stores a computer software program which causes an information processing apparatus to start, the updating recording medium storing identification information of said information processing apparatus and an updating computer software program that updates the computer software program which causes said information processing apparatus to start.

77. (Currently Amended) The recording medium as claimed in claim 76, wherein said updating computer software program is produced based on an electronic signature, the identification information of said information processing apparatus and a second computer software program, the electronic signature being produced from the identification information

of said information processing apparatus and a second computer software program that updates the computer software program which causes said information processing apparatus to start.

78. (Previously Presented) The recording medium as claimed in claim 76, wherein said recording medium conforms to a plug and play standard.